

Product name: Krytox GPL 205 PFPE / PTFE grease
Document Nr.: SD00164003060-01

Date: July 8th 2019
Version: 1.0

Section 1: Identification of the substance or mixture and the company

1.1. Product Identifier

Krytox GPL 205 PFPE / PTFE grease

1.2 Relevant identified uses of the substance or mixture and uses advised against

Lubricating grease in chemical, oxygen and vacuum applications

1.3. Details of the supplier of the Safety Data Sheet

Vof Micro to Nano
Wateringweg 79
2031EK Haarlem
Netherlands
Tel: +31(0)85-2013155
E: info@microtonano.com

1.4 Emergency telephone number

112 (NLD) or your national emergency telephone number for chemical spills, leaks, fires, exposures or accidents

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Physical:	None
Health:	None
	None
Environment:	None
Other hazards:	None

Classification according to Regulation EC Nr. 1272/2008

Health:	Not classified
	Not classified
Physical	Not classified
Environment:	Not classified
Other hazards:	Not classified



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2.2 Labelling elements

Labelling accordance to Regulation EC Nr. 1272/2008

Hazard pictogramm:	None
Signal word:	None mandated
Hazard statement(s):	None
Precautionary statement(s):	P102: Keep out of reach of children P233: Keep container tightly closed P280: Wear protective gloves/protective clothing/eye protection/face protection P337/313: If eye irritation persists; get medical advice/attention P501-2: Dispose of contents/container to an authorised waste collection point
Supplemental hazard info:	None

2.3 Other hazards

None

Section 3: Composition / information on components

3.1. Substances

Not applicable

3.2 Mixtures

CAS Nr	% (weight)	Name
60164-51-4	73-82	PFPE; perfluoropolyether
9002-84-0	18-27	PTFE; Polytetrafluoroethylene

Section 4: First aid measures

4.1. Description of first aid measures

Contact with eyes:	Rinse cautiously with water for several minutes. If possible, remove contact lenses. Continue rinsing.
Contact with skin:	Wash with water and soap.



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Inhalation: Seek medical attention if irritation persists.
Fresh air, keep warm and at rest.

Ingestion: Seek medical attention if ill effects occur
If swallowed, do not induce vomiting
Seek immediate medical advice

4.2. Important symptoms and effects, either immediate or delayed

Inhalation: Inhalation of fluorine compounds, released as decomposition products above 290°C, may cause lung irritation and pulmonary edema which require medical attention.
Inhalation of fluorine compounds may cause polymer fume fever with flu-like symptoms in humans, especially when smoking contaminated tobacco. Repeated episodes of polymer fume fever may result in persistent lung effects.

Ingestion: None known or expected

Skin contact: Mildly irritating to skin
Symptoms: redness

Eye contact: Mildly irritating to eyes
Symptoms: redness and pain, impaired vision

4.3. Indication of any immediate medical attention and special treatment

General advice: If you feel unwell, seek medical advice; show product label if possible
If symptoms persist, always call a doctor

Section 5: Firefighting Measures

5.1. Extinguishing media

Water spray, foam, carbon dioxide or dry agent

5.2 Special hazards arising from the substance or mixture

Not a fire hazard. Toxic decomposition products may be formed.

5.3 Advice to firefighters

Wear full protective clothing. Wear self-contained breathing apparatus.



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Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear suitable protective clothing including eye/face protection

6.2 Environmental precautions

Avoid release into the environment

6.3 Methods and material for containment and clean up

Clean up spills immediately

The material presents a slip hazard and spills must be cleaned thoroughly. Collect spillage, absorbed spillage and wipes in a suitable container for disposal.

Wash spill area with steam, solvents or detergents to remove last traces of residue.

6.4 Reference to other sections

For further information see section 8

Section 7: Handling and storage

7.1. Precautions for safe handling

Do not get in eye, on skin or on clothing.

Wear protective gloves/protective clothing/eye protection/face protection

Have eyewash bottles available

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly close, in a cool, well ventilated place

Keep out of reach of children

7.3 Specific end uses(s)

Lubricating grease in chemical, oxygen and vacuum applications



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Section 8: Exposure control and personal protection

8.1. Control parameters

No exposure limits determined

8.2 Exposure controls

Control procedures: Ensure adequate ventilation. If the polymer is heated above 290°C local ventilation must be used to avoid exposure to fumes.

Personal protection: Take precautions to avoid contact with eyes and skin when handling the product
Wash hands at breaks and at the end of work

Inhalation: In case of insufficient ventilation, wear suitable respiratory equipment

Hands and skin: Wear suitable gloves against chemicals; recommended gloves:
Nitrile

Eyes: Wear safety goggles

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance/physical state: Paste, grease

Colour: White

Odour: None

pH Neutral

Boiling point/range: Not determined

Melting point/range: 250°C

Flash point: Not applicable

Evaporation rate: Not available

Explosion limits: upper limit: Not available
lower limit: Not available

Vapour pressure: Not determined

Relative density: 1.89-1.93 g/cm³ @ 24°C

Solubility in water: Insoluble

Auto-ignition: Not applicable

Viscosity: 522 cSt @ 20°C

9.2 Other information

VOC: None



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Section 10: Stability and reactivity

10.1. Reactivity

No hazardous reactions known if used for its intended purposes

10.2 Chemical stability

Stable

10.3 Possibility of hazardous reactions

No hazardous reactions known if used for its intended purposes

10.4 Conditions to avoid

Avoid overheating above 300°C

10.5 Incompatible materials

Not determined

10.6 Hazardous decomposition products

Fluorinated compounds

Section 11: Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure:

Inhalation: May cause respiratory irritation
Skin contact: May cause mild irritation to skin
Eye contact: May cause mild irritation to eyes
Ingestion: No known significant effects
Chronic: No known long-term effect

Toxicological data:

Ingredient	Toxicity	Irritation
Krytox GPL 205 PFPE / PTFE grease	Oral ALD (rat) > 11, 000mg/kg	Not available



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Section 12: Ecological information

12.1. Toxicity

Not classified

12.2 Persistence and degradability

No experimental data available

12.3 Bioaccumulative potential

No experimental data available

12.4 Mobility in soil

No information available

12.5 Results of PBT and vPvB assessment

No information available

12.6 Hazardous decomposition products

No experimental data available

Section 13: Disposal considerations

13.1. Waste treatment methods

Product: This material and its container must be disposed of in a safe way.
Do not discharge into drains or the environment, dispose to an authorised waste collection point.

National regulations: Disposal should be in accordance with local, state or national legislation.

Section 14: Transport information

14.1. UN number

UN-number: N/A



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14.2 UN proper shipping name

Proper shipping name: N/A

14.3 Transport hazard class(es)

Class: N/A
ADR/RID-Classification code: N/A

14.4 Packing group

Packing: N/A

14.5 Incompatible materials

ADR/RID- Environmentally hazardous: N/A
IMDG-Marine pollutant: N/A
IATA/ICAO-Environmentally hazardous: N/A

14.6 Special precautions for user

ADR/RID-Tunnel code: N/A
IMDG-Ems: N/A
IATA/ICAO-PAX: N/A
IATA/ICAO-CAO: N/A

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC code

Not applicable

Section 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

UN-number: N/A

15.2 Chemical safety assessment

No information available



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Section 16: Other information

RoHS Directive Compliant

This product is fully compliant with the directive 2100/65/EU Annex II (RoHS). It does not contain any lead, cadmium, mercury, hexavalent chromium, PBB's or PBDE's.

WEEE

This product is not a piece of electrical or electronic equipment, and it therefore not governed by Directive 2002/96/EC on waste electrical and electronic equipment (WEEE)

Abbreviations:

ALD	Acute lethal dose
GHS	Global Harmonised System of Classification of Labelling Chemicals
Irrit.	Irritant
LC50	Lethal Concentration 50%
LCLo	Lowest published lethal concentration
LD50	Lethal Dose 50%
N/A	Not applicable
N/E	Not estimated
PBT	Persistent Bioaccumulative and Toxic
WEL	Workplace Exposure Limit
Repr.	Reproductive toxicant
RoHS	Restriction of Hazardous Substance
SEM	Scanning Electron Microscope
STEL	Short-Term Exposure Limit
STOT	Specific Target Organ Toxicity
TCLo	Lowest published toxic concentration
vPvB	very Persistent and very Bioaccumulative
WEEE	Waste Electrical and Electronic Equipment

DSD / DPD label elements

None

Full Text Risk and Hazard codes

None

Safety advice:

- S02 – Keep out of reach of children.
- S09 – Keep container in a well-ventilated place.
- S13 – Keep away from food, drink and animal feeding stuff.
- S20 – When using, do not eat or drink.
- S26 – In case of contact with eyes, rinse with plenty of water and seek medical help.
- S281 – After contact with skin, wash immediately with detergent and plenty of waterways.
- S29 – Do not empty in drains.



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- S35 – This material and its container must be disposed of in a safe way.
- S36 – Wear suitable protective clothing.
- S37 – Wear suitable gloves.
- S39 - Wear eye / face protection.
- S41 – In case of fire and/or explosion; DO NOT breathe fumes.
- S43 – In case of fire use water, foam or dry agent
- S45 – In case of accident or if you feel unwell, immediately contact Doctor or Poisons information center (show label if possible).
- S46 – If swallowed, seek immediate medical advice and show label if possible.
- S56 – Dispose of this material and its container at hazardous or special waste collection point.
- S57 – Use appropriate container to avoid environment contamination.
- S61 – Avoid release to the environment
- S63 – In case of accident by inhalation; remove casualty to fresh air and keep at rest
- S64 – If swallowed, rinse mouth with water (only if person is conscious)

This product should be stored, handled and used in accordance with good industrial hygiene practices and in accordance with any legal regulation.

The information contained herewith is based on the present state of our knowledge and is intended to describe the product from the point of view of safety requirements. It does not guarantee any specific properties.

It is the responsibility of the user to query and verify any information seeming suspect or where doubt on the validity may exist. The buyer assumes all responsibility of using and handling the product in accordance with local, state, federal and international regulations.



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